

Appln. No. 09/921,864
Amdt. Dated December 23, 2003
Reply to Office action dated August 26, 2003

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (cancelled)

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (canceled)

Claim 5 (canceled)

Claim 6 (new): A respirator type apparatus used for delivering gas into the pulmonary tract of a patient during breathing, said apparatus having an operating point and a circuit for stabilizing said operating point comprising:

a pressure transducer responsive to the breath of said patient;

a differential amplifier having an output and a gain;
initialization means coupled to the output of said differential amplifier,
said initialization means having an output;
a voltage comparator having an output and coupled to the output of said
initialization means; and
a delayed negative feedback circuit coupled to the output of said
initialization means and having an output; the output of said delayed negative feedback
circuit being coupled to said differential amplifier, said delayed negative feedback circuit
reducing the gain of said differential amplifier to substantially zero during a
predetermined time period upon activation of said initialization means and restoring the
circuit to maximum AC gain at the end of the initialization period, the output of said
voltage comparator changing state when the breath of a patient is detected subsequent to
the completion of said predetermined time period.

7. (new): A circuit for use in a respirator type apparatus, said apparatus delivering gas to
the pulmonary tract of a patient during inspiration, said circuit having an operating point
comprising:

a piezoresistive pressure transducer responsive to the breath of said patient
and generating a signal in response thereto;

a differential amplifier having an output and a gain, said differential
amplifier being responsive to said signal;

initialization means coupled to the output of said differential amplifier,
said initialization means having an output, said initialization means becoming operative

for a predetermined time period when power is applied to said apparatus, said initialization means causing said apparatus to be at said operating point at the end of said predetermined period;

a voltage comparator having an output and first and second inputs, said first and second inputs being coupled to the output of said differential amplifier; and

a delayed negative feedback circuit coupled to the output of said initialization means and having an output; the output of said delayed negative feedback circuit being coupled to said differential amplifier.

8. (new): The circuit of claim 7 wherein the voltage at said first input of said voltage comparator is approximately at said operating point, the voltage at said second input of said voltage comparator being less than said operating point.

9. (new): The circuit of claim 8 wherein the voltage at said first input of said voltage comparator and said second input of said voltage comparator increase on patient inspiration.

10. (new): The circuit of claim 9 wherein the voltage increase at said second input of said voltage comparator is greater than the voltage increase at said first input of said voltage comparator, the voltage difference causing the output of said voltage comparator to change state.